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# COAL NONFATAL

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

District 9

REPORT OF INVESTIGATION  
(Underground Coal Mine)

NONINJURY COAL MINE OUTBURST (BOUNCE) ACCIDENT

L. S. Wood Mine (ID No. 05-00300)  
Mid-Continent Resources, Inc.  
Redstone, Pitkin County, Colorado

May 11, 1981

by

Louis Villegos  
Coal Mine Inspector

RECEIVED  
MAY 15 1981  
MINE SAFETY AND HEALTH  
ADMINISTRATION  
DISTRICT 9

Originating Office - Mine Safety and Health Administration  
Drawer J, 575 East First South, Price, Utah 84501  
Jensen L. Bishop, Subdistrict Manager

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Legend:

- 1 - No. 1 slope return air course
- 2 - No. 2 slope intake air course
- 3 - No. 3 slope intake air course (belt slope)
- 4 - No. 4 slope intake air course (track slope)
- 5 - No. 5 slope intake air course
- 6 - No. 6 slope intake air course

A - Tail piece (Stamler)

B - Shuttle car roadway

C - 12 C.M. miner } Completely covered by coal

D - Shuttle Car }

E - Temporary brattice curtains

4E - Where methane check indicated the presence of 5 percent CH<sub>4</sub>.

# Abstract of Investigation

U.S. Department of Labor  
Mine Safety and Health Administration



## Authority—

This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 95-173, as amended by Public Law 95-164.

### SECTION A—IDENTIFICATION DATA

Noninjury Outburst  
1. Title of investigation: (Bounce) Accident  
2. Date MESA investigation started: May 11, 1981  
3. Report release date: June 9, 1981  
4. Mine: L. S. Wood Mine  
5. Mine ID number: 05-00300  
6. Company: Mid-Continent Resources, Inc.  
7. Town, County, State: Redstone, Pitkin Co, CO  
8. Author(s): Louis Villegos

### SECTION D—ORIGINAL OFFICE

18 Mine Safety and Health Administration  
Coal Mine Health and Safety District No.: 9  
Address: Drawer J, Price, UT 84501

### SECTION B—MINE INFORMATION

9. Daily production: 1,345 Tons  
10. Surface employment: 6  
11. Underground employment: 101  
12. Name of coalbed: Coal Basin "B"  
13. Thickness of coalbed: 84 Inches

### SECTION C—LAST 10 DAYS OF INJURY FREQUENCY RATE (ISAC) FOR

14. Industry: 10.31  
15. This operation: 16.00  
05/09/79  
16. Training program approved: Mod. 06/25/80  
17. Mine Profile Rating: 741

### SECTION E—ABSTRACT

On Monday, May 11, 1981, at 10:15 a.m., an outburst of coal (bounce) occurred inby the last open crosscut in No. 5 slope (intake) of the slopes working section. No personal injury or property damage was suffered.

### SECTION F—MINE ORGANIZATION

| Company officials:          | Name  | Address                                    |
|-----------------------------|---|--|
| 19. President:              | <u>John A. Reeves, Sr.</u>  | <u>P. O. Box 158, Carbondale, CO 81623</u> |
| 20. Superintendent:         | <u>Tom Scott</u>  | <u>P. O. Box 158, Carbondale, CO 81623</u> |
| 21. Safety Director:        | <u>Ron Henderson</u>  | <u>P. O. Box 158, Carbondale, CO 81623</u> |
| 22. Principle officer—H&S:  | <u>Tom Scott</u>  | <u>P. O. Box 158, Carbondale, CO 81623</u> |
| 23. Labor Organization:     | <u>Redstone Workers Association 0526 Hwy. 133, Carbondale, CO 81623</u> |  |
| 24. Chairman—H&S Committee: | <u>Richard Lane</u>   | <u>0526 Hwy. 133, Carbondale, CO 81623</u> |



### Commentary

On Monday, May 11, 1981, at 7:15 a.m., crews for the 001-0 slopes section, the 004-0 2 north section, and the 301-0 longwall section under the supervision of section foremen, Dennis Bouwens, Bill Porter and Sam Staples, respectively, entered the mine and traveled to their respective sections by mantrip and on foot. Examination of sections was conducted and then assignment duties and work locations were given to crew members. Mining of coal in the slopes section, which started at 8:30 a.m., commenced by grading the floor area of No. 5 slope from a point 200 feet outby the last open crosscut. The face of No. 5 slope was reached at approximately 9:30 a.m. and mining of coal continued until 10:15 a.m., when the coal outburst (bounce) occurred. Two small bounces occurred prior to the main outburst, according to slopes section foreman Dennis Bouwens. Incidentally, the slopes section tailpiece man had been advised that when he hears two bounces immediately in succession, to run to the section power center and deenergize the equipment. He was on his way to the power center when the main outburst hit. Dennis Bouwens said that when it hit everyone started running uphill, and while they were running, coal was hitting their back sides for 200 feet up to the 2nd open crosscut of No. 5 slope. Dennis Bouwens said that at some time during their running, contact had been made with all crew members except Ray Arellano, the miner operator. Then he and Mike Jerome went back downhill and found Ray at the 2nd open crosscut. They helped Ray in making his exit from the section. Dennis Bouwens also said he had made a methane check on No. 4 slope, 100 feet downhill from the 301 longwall section belt entry, and it showed the presence of at least 5 percent CH<sub>4</sub>. The check had pegged his meter. The area of No. 4 slope where this methane check was made is 100 feet uphill from the conveyor belt section tail piece. This writer was on a 103(i) spot inspection of the mine on this date and was advised of the occurrence while walking down the track slope. George Small, mine foreman, and I met the slopes crew in a crosscut between No. 4 and No. 5 slopes, halfway between the headgate and tailgate entry of the 301 longwall section. Ray Arellano, miner operator, had just arrived at this crosscut and was having trouble breathing due to coal dust in his mouth and nostrils. There was an oxygen gas cylinder located in this crosscut. Mr. Arellano was administered some of this oxygen and it helped his breathing to where he quit coughing and gagging. This inspector, George Small, and Dennis Bouwens walked back downhill into the slopes section by crisscrossing the No. 2, 3, 4, 5, and 6 slopes checking for methane. All these slopes were only showing from 0.2 to 0.5 percent CH<sub>4</sub> down to the last open crosscut between No. 5 and No. 6 slopes. The first check in No. 1 slope, the return air course, taken 400 feet up hill from the last open crosscut showed the presence of 3 percent methane in the air stream. This reading increased slowly until a check made at the last open crosscut between No. 2 and No. 3 slopes showed the presence of 3.8 percent methane. An inspection of the area affected by the coal outburst showed the presence of float coal dust, on both coal ribs and floor, for a distance of 250 feet up hill from the last open crosscut of No. 5 slope. The area of No. 5 slope inby the last open crosscut was

full of coal from rib to rib, and to within 2½ to 3 feet from the roof on the outby end of outburst. The exact position of the 12 C.M. and the shuttle car could not be determined as they were completely covered up with coal.

#### Discussion and Evaluation

The investigation revealed the following factors relevant to the occurrence of the outburst (bounce) of coal:

1. The coal outburst caused the withdrawal of miners and disrupted mining activity for more than one hour.
2. The coal outburst affected ventilation only in the slopes section.
3. High concentrations of methane gas were liberated during and after the outburst.
4. After the outburst, the height of No. 5 slope from a point 8 feet inby the last open crosscut measured 30 inches to 36 inches in height. At a distance of approximately 50 feet inby this point, the coal was against the roof. This area of slope had been mined 7½ feet high and 20 feet wide.
5. The outburst only destroyed the ventilation brattice line into the area of No. 5 slope inby the last open crosscut. There were no other ventilation devices affected by the outburst.
6. The overburden in this area of mine is in excess of 2,000 feet in thickness. This in itself is exerting extreme pressures on the coal bed.
7. The last reported and investigated coal outburst was on April 13, 1981.

#### Findings of Fact

Evidence of findings of the investigation indicated there were no violations of Title 30 CFR which contributed to the occurrence of the accident. Due to the presence of methane in the return air course, a 107(a) order was issued and for purposes of an investigation a 103(k) order.



Conclusion

This accident occurred because of the overburden which is in excess of 2,000 feet in thickness and exerts extreme pressure on the coal bed.

Respectfully submitted,

*Louis Villegos*

Louis Villegos  
Coal Mine Inspector

Approved by:

*Jensen L. Bishop*  
Jensen L. Bishop  
Subdistrict Manager

## APPENDIX

The investigation was conducted by the Mine Safety and Health Administration and those persons present during the investigation were:

### Mid-Continent Resources, Inc. Officials

|                |                     |
|----------------|---------------------|
| Tom Scott      | Mine Superintendent |
| George Small   | Mine Foreman        |
| Dennis Bouwens | Section Foreman     |
| Sam Staples    | Section Foreman     |

### Mid-Continent Resources, Inc. Employees

|             |                      |
|-------------|----------------------|
| Mike Jerome | Shuttle Car Operator |
|-------------|----------------------|

### Mine Safety and Health Administration

|                |                     |
|----------------|---------------------|
| Louis Villegos | Coal Mine Inspector |
|----------------|---------------------|